WHAT IS CLAIMED IS:

1   1.   A method for internet protocol (IP) address selection, comprising the steps of:

2   assigning a single domain name to a set of server IP addresses;

3   receiving a request for the domain name from a client IP address;

4   retrieving a set of IP routes linking the server IP addresses and the client IP

5   address; and

6   selecting an IP route from the set of routes which meets predetermined criteria.

1   2.   The method of claim 1 wherein the retrieving step includes the step of:

2   retrieving the set of IP routes from a cache database.

1   3.   The method of claim 1 wherein the retrieving step includes the step of:

2   retrieving the set of IP routes from an IP routes database.

1   4.   The method of claim 1 wherein the retrieving step includes the step of:

2   retrieving the set of IP routes from a set of routers using a BGP protocol.

1   5.   The method of claim 1 wherein the retrieving step includes the step of:

2   retrieving the set of IP routes from a set of routers using an SNMP (MIB retrieval)

3   protocol.

1   6.   The method of claim 1 wherein the retrieving step includes the step of:

2   retrieving the set of IP routes from a set of routers using a Telnet protocol.

1   7.   The method of claim 1 wherein the selecting step includes the step of:

2   selecting the IP route from the set which has a shortest AS path.

1   8.   The method of claim 1 wherein the selecting step includes the step of:

2   selecting the IP route from the set which has a lowest origin type.

1   9.   The method of claim 1 wherein the selecting step includes the step of:

2   selecting the IP route from the set which has a lowest MED.

1   10.   The method of claim 1 wherein the selecting step includes the step of:

2   selecting the IP route from the set equal to a default IP address.

1   11.   The method of claim 1 further comprising the step of:

2   storing the IP routes in a cache database.

1   12.   The method of claim 1 further comprising the step of:

2   storing the IP routes in an IP routes database.

1   13.   The method of claim 1 further comprising the step of:

2   defining an enhanced address resource record, including a domain name, a list of

3   corresponding servers and routers, router retrieval parameters, a default client/server IP

4   route, and timeouts.

1   14.   The method of claim 1 further comprising the step of:

2   transmitting an IP address from the set of server IP addresses which corresponds

3   to the selected IP route.

1   15.   A computer-usable medium embodying computer program code for commanding a

2   computer to perform internet protocol address selection, comprising the steps of:

3   assigning a single domain name to a set of server IP addresses;

4   receiving a request for the domain name from a client IP address;

5   retrieving a set of IP routes linking the server IP addresses and the client IP

6   address; and

7   selecting an IP route from the set of routes which meets predetermined criteria.

1   16.   The computer-usable medium of claim 15 wherein the retrieving step includes the

2   step of:

3   retrieving the set of IP routes from a cache database.

1   17.   The computer-usable medium of claim 15 wherein the retrieving step includes the

2   step of:

3   retrieving the set of IP routes from a set of routers using a BGP protocol.

1   18.   The computer-usable medium of claim 15 wherein the retrieving step includes the

2   step of:

3   retrieving the set of IP routes from a set of routers using an SNMP (MIB retrieval)

4   protocol.

1   19.   The computer-usable medium of claim 15 wherein the retrieving step includes the

2   step of:

3   retrieving the set of IP routes from a set of routers using a Telnet protocol.

1   20.   The computer-usable medium of claim 15 wherein the selecting step includes the

2   step of:

3   selecting the IP route from the set which has a shortest AS path.

1   21.   The computer-usable medium of claim 15 wherein the selecting step includes the

2   step of:

3   selecting the IP route from the set which has a lowest origin type.

1   22.   The computer-usable medium of claim 15 wherein the selecting step includes the

2   step of:

3   selecting the IP route from the set which has a lowest MED.

1   23.   The computer-usable medium of claim 15 wherein the selecting step includes the

2   step of:

3   selecting the IP route from the set equal to a default IP address.

1   24.   The computer-usable medium of claim 15 further comprising the step of:

2   transmitting an IP address from the set of server IP addresses which corresponds

3   to the selected IP route.

1   25.   A system for internet protocol (IP) address selection comprising a:

2   a set of servers, having a single domain name;

3   a client computer;

4   a set of routers, coupled to the servers and the client computer, for storing IP

5   routes between the servers and the client; and

6   a domain name system server, coupled to the routers, for selecting one of the IP

7   routes which meets predetermined criteria.

1   26.   The system of claim 25 further comprising:

2   a cache database, coupled to the domain name system server, for storing

3   previously selected IP routes.

1   27.   The system of claim 25 further comprising:

2   an IP routes database, coupled to the domain name system server, for storing all of

3   the IP routes.

1   28.   The system of claim 25 wherein:

2   the domain name system server includes an enhanced address resource record

3   storing the single domain name, a list of the servers and routers, a set of router retrieval

4   parameters, a default IP route, and timeouts; and

5   the domain name system server accesses the retrieval parameters in order to select

6   the IP routes.

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